Massachusetts Department of ENVIRONMENTAL PROTECTION

Final Report

For EPA New England Cooperative Agreement X1-98188401

Massachusetts Supermarket Organics Recycling Network (SORN)

January 2006

Introduction:

The Massachusetts Department of Environmental Protection (MassDEP) received a grant through an EPA Cooperative Agreement with the Jobs Through Recycling Program in the amount of $16,725 to support a network of assistance for supermarket organics recycling programs in the state. MassDEP's Consumer Programs Branch in the Bureau of Waste Prevention submits this final report to US EPA New England for the project period: 6/2003 – 6/2005. This report summarizes the goals of the project, activities accomplished, and specific deliverables completed.

Results from this project have been impressive; the number of supermarkets composting in Massachusetts has increased from 14 to 54 locations and an additional 65 locations for future development have been identified. MassDEP has worked cooperatively with the industry and individual supermarkets to build a network of assistance, gain commitment from the industry to compost, and develop an innovative "beyond compliance" state certification program for the industry that offers regulatory relief.

Together, these elements have built a public/private partnership that makes sense for the supermarket industry and its bottom line, and the state's goals to reduce organic wastes. This program has received state and national attention (Attachment A: Worcester Business Journal/Massachusetts Audubon Society 2005 Environmental Awards) and has become a model for MassDEP to work with other industry sectors on targeted materials.

Background:

In Massachusetts, it is estimated that rates of diversion from disposal to composting are currently less than 10 percent of the nearly 900,000 tons of commercial food waste generated each year. Commercial food waste represents approximately nineteen percent (19%) of the total commercial waste stream[1]. In the Beyond 2000 Solid Waste Master Plan, MassDEP identified food waste diversion as a priority focus area for waste reduction due to its increased volume and high disposal fees.

MassDEP has identified supermarkets as a major organics generator - with over 400 supermarkets in the state generating an estimated 90,600 tons of organics material per

[1] See "Identification, Characterization, and Mapping of Food Waste and Food Waste Generators in Massachusetts" Final Report, 2002, located at www.state.ma.us/dep/bwp/dswm/dswmpubs.htm#other for more information.

year[2]. Waste disposal represents a significant and increasing operating cost for this industry, especially in Massachusetts where disposal fees range from $80 - $100 per ton. Supermarkets are recognized as a retail sector with slim profit margins and because 75-85% of their waste stream is biodegradable, it makes sense to target supermarkets for composting which can be a lower cost alternative to disposal.

MassDEP, the Massachusetts Food Association (MFA), and WasteCap of Massachusetts developed a successful pilot project in 2002 to help supermarkets divert organic materials and other waste called the *Supermarket Recycling Organic Initiative (SROI)*. One of the supermarkets in the pilot - Roche Bros. Supermarkets- demonstrated significant waste reduction and financial savings: the pilot diverted 5-10 tons of materials per week per store and showed annual savings of $10,000 - $20,000 per store using a dedicated organics compactor process. This chain has since expanded its organics program to include thirteen of its sixteen stores.

Based on the success of the program, the clear financial savings to the industry, and meeting MassDEP Master Plan goals, MassDEP applied for and received a grant to continue this program and expand the network of assistance to supermarkets.

Project Goals:

The goal of this grant was to expand on the SROI program and provide the assistance needed to move this program forward through 2005. Specific goals included:

- Support and troubleshoot problems with existing programs with 14 existing stores.
- Identify additional supermarkets for assistance
- Update the SROI handbook and make available in hard copy, online, and CD
- Test a new Supermarket Challenge for EPA's WasteWise Program that focuses on the supermarket industry.
- Identify employee attitudes about recycling using a survey before implementing program and after.
- Document the results in a final report.

MassDEP has also contributed matching funding and staff time to this project.

Project Summary:

MA DEP hired JFConnolly & Associates, Waste Recovery Solutions, WasteCap of Massachusetts, and The Center for Ecological Technology (the project team) to expand on the SROI program and provide the assistance needed to move this program forward. Throughout the first half of 2004, the project team engaged key contacts such as store managers, senior operations management, and other dedicated chain resources at the Big Y, Roche Bros., Shaw's, Stop & Shop, and Whole Foods supermarket chains to:

- Review existing program status
- Analyze operations, opportunities, problems, and establish financial and environmental benchmarks for individual stores and chains;
- Identify opportunities for expansion to new store locations; and
- Provide technical assistance and set goals for existing and new programs

Team members completed store visits to over fifty existing locations across the five supermarket chains and reviewed programs, collected data, and established a baseline of

[2] Same as previous footnote.

organics diversion tonnage including ratios for cardboard, organics, and trash. Recommendations were made to supermarket chain leadership, retail operations management, and store management teams for new and existing program improvement. Team members provided technical assistance to improve existing programs and by adding new stores to the program.

The team also completed site visits to the corresponding composting facilities and hauling companies supporting each chain and worked to educate these groups on the operational needs of supermarkets.

Four new supermarket chains were identified for future inclusion in the program: Food Master, Hannaford Bros., Market Basket, and Trucchi's. Team members and representatives of these chains met to discuss and plan the introduction of organics source separation and composting programs for these new chains in 2005.

The project team also developed a collaborative, non-regulatory strategy for the industry-wide growth of organics recycling/composting in Massachusetts. MassDEP, MFA and industry representatives drafted a Memorandum of Understanding (MOU) for organics and other recycling in Massachusetts which was finalized and signed August 24, 2005 (see Attachment B: MOU and Attachment C: MassDEP Press Release). A positive outcome from this effort could be an accelerated rate of new stores joining the program using the "network" to leverage available hauling resources and compost capacity.

Lastly, a component of this project has been to engage the supermarket chains in the Massachusetts WasteWise program – a voluntary waste reduction recognition program. MassDEP, EPA, and the project team recruited six supermarket chains (Big Y, Hannaford Bros., Roche Bros., Stop & Shop, Shaw's, Whole Foods) for the WasteWise program. Team members helped the chains set waste reduction, recycling and purchasing of recycled content material goals and helped to develop systems for measuring these goals over three years. All six chains received "MA WasteWise Supermarket Recycling Leadership Awards" (see Attachment D: MassDEP Press Release) – an important step in encouraging program commitment at all levels.

Project Details:

ENGAGE SUPERMARKET CHAINS:

The team members collaborated with key contacts from each supermarket chain including store managers, senior operations management, and dedicated chain resources such as managers of environmental affairs to review current organics diversion programs and identify participating and potential new stores. They also worked with the contacts to identify composting facilities and hauling companies, discuss project goals, and gather operational/financial data.

Participating chains signed Memorandums of Understanding and confidentiality agreements with the consultants representing MassDEP in order to ensure program commitment. For an example of these documents see Attachment E.

DEVELOP TRACKING SYSTEM

A process was established to identify pertinent data such as store location, participating vendors, trash and recycling tonnage data, hauling data, pricing data, and other components of the chain programs such as equipment used and compostable bag usage. The team members used an input form (Attachment F) to gather information from each of the stores. All information was compiled into a database to enable analysis of the programs by store, by chain, or by all participating locations.

Because tonnage data on current organics, cardboard, and trash varied by store, the contractor annualized these numbers from existing information. Baseline percentages of organics recycling, cardboard recycling, and trash disposal for the existing locations served to define current program status, highlight opportunities for improvement, and establish goals related to store locations and improvements in store operations.

Store information was consolidated from each location into a summary of chain data that allowed the team to define current chain diversion rates and future goals (Attachment G). The projections were calculated assuming program improvements and new chain commitment.

CONDUCT STORE SITE VISITS

The project team visited fifty-four locations across the five supermarket chains. The site visits allowed the team to define baseline program operating practices for each location and chain and identify assistance needs.

CONDUCT COMPOSTING FACILITY SITE VISITS

The team conducted site visits and held meetings with the following composting facilities: Recycle Away Group Services, Watts Family Farms, Martin Farms, WeCare Environmental, Greenleaf Composting, Lion's Head, and Brick Ends Farm. These composting facilities serve the participating chains or were determined to be of value as the current supermarket programs expand and as new supermarket chains consider implementing composting programs. Other licensed composting facilities that had expressed an interest in receiving supermarket organics feedstock and have additional composting capacity were contacted via telephone.

During the course of this project, it was determined that in some cases the operational needs of the supermarkets didn't match that of the composting facilities, such as the ability to take certain types and quantities of materials (e.g., waxed cardboard), or even, in some cases, hours of operation. At these meetings, the team explained supermarket-operating practices and discussed the need for capacity, ability to handle large quantities of supermarket organics, economic issues for the supermarkets, and the importance of having an effective communication feedback loop between the supermarkets and the site operators to ensure clean loads. For one chain (Roche Bros.), the team provided assistance in identifying and relocating waste services from one composting facility that shut down to another composting facility.

CONDUCT HAULER SITE VISITS

Meetings with the following haulers who service the participating chains or had expressed interest in serving the supermarket sector were held: Watts Family Farm, Harvey Industries, BP Trucking, WeCare Environmental, Triple T Trucking, BFI, Waste Management, Save that Stuff, Jet-A-Way, Suburban Companies, and Waste Solutions.

The purpose of these meetings was to educate the haulers on supermarket operational practices relevant to hauling including: optimal scheduling of hauls/service, methods of feedback to the stores/chains, specific equipment requirements, ways to quantify results, and how to identify opportunities for increased organics tonnage. Additionally, discussions took place regarding the ability to combine compactor and toter programs with supermarkets, hotels, and food processors in order to achieve profitable route density and by leveraging geographic proximity of generators to composting facilities.

IDENTIFY NEEDS AND PROVIDE TECHNICAL ASSISTANCE TO THE SUPERMARKET CHAINS

Team members and supermarket chain contacts prioritized opportunities for program improvements by location and defined appropriate technical assistance activities with the goal of improving source separation and operational effectiveness, increasing diversion rates, reducing operational costs, and identifying additional locations. The team reviewed hauling and disposal practices and developed economic and program recommendations for improvements to stores, composting facilities, hauling companies, and other supporting vendors.

Some of the specific assistance that was provided included:

- facilitating the installation of cardboard compactor units as a vehicle to free up compactor space for organics;
- reviewing existing equipment and recommending the use of swappable containers in order to reduce operational down-time while the compactor unit is away from the building during product disposal;
- reviewing, testing, and recommending the use of biodegradable bags;
- reviewing and implementing shrink wrap recycling programs;
- training new store management teams;
- re-training associates at existing locations where needed;
- reviewing, recommending, and facilitating the printing of signage;
- meeting with organizational leaders to plan program expansion.

DEVELOP SUSTAINABLE STRATEGY FOR INDUSTRY WIDE GROWTH OF ORGANICS RECYCLING

The project team, DEP, MFA, members of the Organics Sub-Committee of the MassDEP's Solid Waste Advisory Committee, and supermarket chain leaders met to communicate progress and discuss issues throughout the project. Expertise and experience were leveraged through the sharing of information. Because waste is a non-proprietary issue, store chains were able to learn from and share their experiences with each other. Some of the issues discussed included operational procedures generic to the supermarket sector, hauling issues, vendor relations, equipment solutions, composting facility service levels, general program economics, success stories on how stores and chains identified and resolved problems, and long-term strategies to benefit the supermarket sector as a whole in advancing organics recycling.

Of strategic significance is the collaborative effort of MassDEP and MFA to work together on a voluntary strategy for increased supermarket organics diversion. MassDEP and the supermarket industry worked cooperatively to develop a *Memorandum of Understanding for Enhancing Recycling in Supermarkets in the Commonwealth of Massachusetts*, which was signed on August 24, 2005. The MOU expresses the combined commitment of both parties to advance organics and other recycling in Massachusetts. Some of the elements of the MOU include:

- MassDEP will develop a voluntary supermarket recycling program certification to provide annual regulatory relief to individual stores from comprehensive waste ban inspections in exchange for certifying they have certain recycling programs in place. This is a "beyond compliance" program.
- Provide tools to jump-start and expand programs, including: supermarket-composting manual, list of haulers and composters, technical assistance for training and store program development.
- Publicize program and results.
- Work together to identify solutions for the growth of organics and other recycling in the supermarket industry.

It is anticipated that the result will be an industry-wide initiative to expand organics recycling and composting at an aggressive, sustainable rate in anticipation of future regulatory efforts surrounding disposal of supermarket organics waste.

WASTEWISE GOAL-SETTING AND AWARDS

In October 2004, MassDEP presented "Massachusetts WasteWise Supermarket Recycling Leadership Awards" to six supermarket chains at a Massachusetts Food Association Board meeting (attachment D). This recognition helped gain supermarket chain commitment to develop organics recycling programs and identify program expansion opportunities. WasteWise is a national voluntary waste reduction program that provides technical assistance and recognition to members for their efforts. The team was instrumental in helping supermarket chains identify goals for the program and assist in comparing current diversion results with reasonable projections with additional stores. Follow-up efforts related to this initiative will include improving operational effectiveness at existing locations, adding new stores in existing chains, and targeting new chains for inclusion in the program.

ANALYSIS OF EMPLOYEE ATTITUDES ON RECYCLING

An analysis of employee attitudes on recycling was not conducted during this project period. This deliverable is planned for the next phase of the project. However, MassDEP estimates that over 400 managers and staff associates were trained during the project period. Anecdotally, the contractors reported the following:

- Whole Foods: trainings were very well received by store associates – in fact, many of the store associates commented that they have wanted to compost for a while and were thrilled that the program was initiated. Additionally, store managers easily integrated source separation training into new associate training sessions. Composting has easily become part of the store culture.
- Roche Bros.: store associates participated in trainings and source separated materials because it was a corporate initiative. There was not the same level of enthusiasm as with Whole Foods; however, source separation practices continue to be taught to all new store associates.
- Stop & Shop: because many of the stores on the Cape have composted for a number of years, it has become a part of the store culture and all new associates are trained to compost.

Summary of Findings

Five supermarket chains in Massachusetts (Big Y, Roche Bros., Stop & Shop, Shaw's, Whole Foods) are currently source separating organic waste across fifty-four (54) locations. The locations include a mix of nineteen (19) compactor locations, sixteen (16) toter locations, and nineteen (19) dumpster locations. The most recent available tonnage and hauling information were collected from each location. All data was annualized for January-December 2004. For a list of assumptions that were made when calculating the data see Attachment H – Assumptions in Determining General Supermarket Economics. Data was also consolidated into a summary of annual chain data for this period (see Attachment G – Tonnage Table SORN 2004). The combined results indicate that fifty-four stores generate approximately 53,300 tons of total waste annually. Of this amount, 26,200 tons is recycled cardboard; 8,900 tons is source-separated organics sent to composting facilities; and 18,200 tons is disposed of as trash. The total percentage recycled is 65.9% of the total waste stream from these supermarkets.

The project team found that the stores with compactor units diverted more material and realized greater savings than stores with other collection systems.

Bringing on new stores to the program could significantly increase the organics tonnage diverted, with an estimated average of 165 additional tons per year for each new location. The use of dedicated organics compactors has been shown to increase the rates of diversion and savings over toter or dumpster systems; however space limitations and financial barriers to investment in this equipment are, unfortunately, operational and business realities of the supermarket sector.

An additional sixty-five new supermarket locations have the potential to set up a program (for a total of 119 supermarkets) for the diversion of a combined 19,600 tons of organic materials to composting. The projected percentage of recycled organics (including cardboard) is 72.3% of the total waste stream from these 119 supermarkets. Across five years, this rate of diversion has the potential to generate approximately 2.5 million dollars of incremental cost savings for the supermarket industry in Massachusetts based on organics diversion to composting, netting an average savings of $4,000 per year per store. This assumes the chains are already realizing the substantial economic benefits of recycling old corrugated cardboard. Composting facilities would also realize increased revenues from dedicated organics diversion in the form of tipping fees and product sales.

ANALYSIS OF COLLECTION METHODS AND PROCEDURES:
Each of the stores divert varied levels of organics tonnage to composting facilities dependent upon store volume, store operational procedures, the operational procedures of the composters, and program economics. Programs with compactors divert the greatest amount of organics as a percent of trash and organics. Additionally, compactor programs that used compostable liner bags diverted the cleanest material to the compost sites.

Compactor Programs: On average, stores that used compactor systems to recycle organics (other than cardboard) saved $7,000 annually. The compactor program allows the stores to include all of the organic wastes, including waxed and wet cardboard, in the materials diverted for composting. In addition, this process lends itself to a very efficient and effective store operation given that storage of compacted materials is located in a container outside of the supermarket building. It is also the most cost effective program for the generator, hauler, and the composter, allowing the greatest diversion of material at the lowest cost per ton of material diverted.

Toter and Dumpster Programs: On average, stores that used toter systems to recycle organics (other than cardboard) saved $2,400 annually. The toter and dumpster programs, though efficient and effective throughout the in-store source separation process, are constrained by the lack of storage in the supermarket back room or loading dock areas and by a need to pick up and haul the organics multiple times per week. In addition, many stores that use the toter system for organics recycling are not recycling wet and waxed cardboard. Results include less material diverted to composting than in the compactor locations and lower savings from avoided disposal costs for the generator. Store space limitations, capital investment spending constraints on the part of the parent chains, and (to a lesser degree) the ability of the composting facility to receive/handle waxed and wet cardboard are key decision-making parameters of using a toter program over a compactor program.

Compostable Bags: Compostable liner bags are being used in the Roche Bros. and Whole Foods compactor programs. These bags serve as the vehicle to transport material out of the collection containers and into the compactor units. The purpose of using a liner bag, as opposed to no liner bag, is to keep the collection containers clean, reducing the need for in-store labor to wash, rinse, and sanitize the containers. The purpose of using a *compostable* liner bag, as opposed to a plastic liner bag, is that the bags can be deposited into the compactor and are designed to disintegrate and biodegrade quickly and safely when

composted in a commercial facility. All composting facilities require the removal of plastics from the loads.

Although compostable liner bags are higher in cost to the chains, the increased organics diversion rates offsets the incremental costs associated with the use of these bags. For toter programs, the use of these bags is cost prohibitive. A more economical, though less environmentally friendly process in toter locations, is to use the non-compostable liners for the toters as a method of collecting organics and keeping the toters clean. However, in most cases, the plastic liner would need to be removed before entering the composting site.

OTHER OPERATIONAL IMPACTS:
Comprehensive Recycling Program Development: In order to ensure clean loads of organics, all "contaminants" need to be pulled out of the waste stream. One of the most striking results from this program has been the need to initiate other recycling programs prior to organics program implementation. These other recycling programs include shrink/stretch-wrap plastics, grocery bags, and hard plastic containers. Combined with recycling cardboard, these comprehensive in-store programs further the success of the program by increasing the savings from avoided disposal costs. Conducting a comprehensive waste analysis at the start of any recycling program is recommended in order to determine appropriate programs and additional savings.

Effective Training: An effective recycling program needs effective and ongoing training to all levels of employees – from store associates, store managers, department managers to senior chain management. Except for one supermarket chain, training was not incorporated into any new employee or ongoing training program. High rates of turnover in the supermarket industry require on-going vigilance, follow-up, and store associate recognition by department mangers. The management teams, who are responsible for programs within their respective departments and at the store level, also need training which should incorporate a clearly defined organization strategy so that they understand the impacts of the program. Lastly, senior chain management should communicate their commitment, vision and mission statement to the organization in order to set common goals for the stores to achieve in the areas of savings, environmental benefits, and community relations.

Measurements

Please note that most of the measurable numbers below are based on average measurements from the 54 supermarkets participating. Because of confidentiality issues, DEP only receives consolidated information. In some cases, such as with Big Y and Western Massachusetts Stop & Shop stores, tonnage numbers were estimated because the hauler does not have the capability to weigh materials recycled.

1. **Amount of waste diverted to recycling (organic material, shrink wrap, cardboard, other):**
   The combined results indicate that fifty-four stores generate approximately 53,300 tons of total waste annually. Of this amount, 26,200 tons is recycled cardboard; 8,900 tons is source-separated organics sent to composting facilities; and 18,200 tons is disposed of as trash. We do not have exact numbers for shrink plastic wrap and pallet plastic wrap – but based on data from 16 stores, we estimate 25 tons per year of plastics is recycled per store. We know that 36 of the stores have active shrink-wrap and plastic bag recycling programs. This would equate to 900 tons per year in the 36 stores with programs.

2. **Dollar savings per store through waste reduction efforts:**

Total dollar savings per store per year equals approximately $47,600 for a compactor store and $43,300 for a toter store – if an organics, cardboard, and plastics recycling program is in place. This includes:

- Organics: Savings for the organics is averaged to approximately $2,700 for stores with a toter system and $7,000 for a compactor system.
- Cardboard: Almost all supermarket chains have been recycling cardboard for many years - long before sending organics for composting. Cardboard savings equals on average about $38,600 per store per year.
- Plastic: about 0.5 tons per week per store, which equals approximately $2,000 per store per year.

3. Estimate of greenhouse gases reduced through diversion efforts (MTCE)

Using the EPA Warm Model, total change in greenhouse gas emissions from recycling organics, cardboard and plastics at 54 supermarkets in MA equals a reduction in emissions estimated at 21,100 to 22,400 MTCE. See Attachment I for a full accounting of the calculations.

4. Measures of diversion and costs through different diversion methods (toter and compactor)

Assumptions:

- Trash assumes $100 per ton total disposal costs. This includes $80 per ton disposal and $20 per ton hauling. Equipment cost not included, which varies by chain depending upon equipment ownership (chain, hauler, or third party).
- Cardboard assumes zero ($0) disposal and hauling costs to the generator.
- Organics assumes: Compactor program, $70 per ton total ($50 per ton disposal and $20 per ton hauling). Toter program, $80 per ton total ($40 per ton disposal and $40 per ton hauling).

Please note: averages given above are only estimates - the costs vary by chain. In particular, the estimates for the toter programs vary the most because there are more variables that determine the price for service (e.g., amount of material picked up and whether the hauler has enough customers to fill the truck, number of stops, driving distance to the composting facility). However, the estimates can be used as a generic set of numbers.

5. Number of biodegradable bags used:

In one year it is estimated that 62,400 compostable bags were used in this project. It is assumed that approximately 75 bags per week per store are used in well run programs. There are 16 stores currently using the bags.

6. Number of employees trained including a before and after survey of attitudes to recycling:

It is estimated that approximately 378 employees in the 54 stores have been trained. This assumes seven management employees per store. However, the contractors believe the number should be closer to 400 since there were other upper management personnel who participated in the trainings. Additionally, based on the anecdotal information from the contractors, most of the store chains that initiated programs have integrated source separation into all new training.

Attitudes on recycling varied by chain as well. Some store chains, such as Whole Foods, have a strong corporate commitment to recycling and employees embraced the composting program. However a more common attitude was that the new composting program was a corporate initiative – thus the store associates and managers had to do it.

7. Amount of "compost" produced

It is estimated that approximately 10,500 cubic yards of compost is generated from 7,700 tons of organics. This assumes that:

1) The supermarket organic material is mixed with approx 7,700 tons of bulking material (about 1:5 by volume) in order to make compost.
2) 1 cubic yard food waste equals approximately 2.5 tons. Therefore, 7,700 tons of food waste equals 3,080 cubic yards.
3) 1 cubic yard of ground leaves (bulking agent) equals approximately 400 lbs. Therefore, 7,700 tons of ground leaves equals 38,500 cubic yards.
4) The result is 41,580 cubic yard of original material which, when composted, reduces to 25% of the original amount. This results in 10,500 cubic yard of material.

8. Amount of dollars leveraged through public investment.

The actual investment varies by chain. We know that each chain has supplied some part of a staff's time to work on this program. The following chains had staff dedicated to working on composting within the companies: Big Y, Roche Bros., Shaw's, Stop & Shop, Whole Foods. An approximate average might be $10,000 per year of expense per chain to "manage" their programs. Additionally, store associates' time was used to participate in the trainings, which averaged $15/hour for approximately 1 hour. If we assume 400 employees participated in one training this would be an additional $6,000.

Additionally, some of the chains initiated programs or training beyond MassDEP funding:

- Roche Bros.: added 7 stores at their own cost during this project period. Additionally, they have hired the same contractor used in this project to manage their chain wide program and retrain store associates when needed.
- Stop & Shop: no new stores added but Stop & Shop conducted a number of retraining sessions.
- Whole Foods: their marketing team engaged in a public education effort using the stores that started composting programs (see attachment J: Compost is Happening at Whole Foods).
- Big Y: provided matching funding for retraining at 7 of their stores.

Lessons Learned:

In Massachusetts, the potential environmental and economic benefits of composting organics across this industry are significant. However, there are a number of barriers to overcome, internal and external to the chains, which make it difficult for supermarkets to initiate and implement an organics-to-composting program without external assistance. Effective programs will need to:

- **Have support from senior chain leadership.** Particularly those in Retail Operations. Absence of senior management support will send the message to the stores that organics diversion is not a priority.
- **Ensure effective communication to all employees.** Senior management, store management, and store employees will ensure success and it is important to target communications appropriately to each of these levels regarding recycling program development, implementation, and success.
- **Develop a comprehensive composting training.** Stores need to have adequate systems for training in place. Management team changes and high rates of employee turnover can degrade results without the integration of organics program training into the overall store/chain training process.

- **Dedicate a compactor for compostables.** Stores with compactor units diverted more material and realized greater savings than stores with other collection systems. Each store should be evaluated for conversion to compactor units over time.
- **Include waxed and soiled cardboard in the compost program.** Processes and infrastructure for waxed and soiled cardboard recycling is key to long-term success and participation for the supermarkets. Many stores are not incorporating waxed and soiled cardboard due to either in-store logistics or the inability of the composting facility to receive and process this product. This will have an adverse impact on generator costs and could be the critical component leading to a positive financial return of this program for the store.
- **Develop a comprehensive recycling program.** An optimal organics program should also include processes to recycle shrink-wrap, hard plastic containers, and other recyclables. Logistics of these programs are sometimes difficult to execute for the chain without outside assistance but will assist in keeping loads of compostables clean.
- **Develop effective communication between compost facility and supermarket store manager.** Timely feedback to the stores from the composting facility is critical for success. A lack of feedback to the stores from the composting facility related to contamination issues and load quality may hinder maximum organics diversion and, as such, lower savings for the generator and the composting facility.
- **Ensure effective long term monitoring and oversight**. The long-term success of the program depends on consistent source separation practices day to day and week after week. To ensure the long term success of the program and quality material for the composting facilities, a commitment towards ongoing monitoring, quality control, and feedback to associates is very important.
- **Recognize composting program publicly.** Recognition of the programs at the industry level, within the communities the supermarkets serve, and within the stores themselves will lead to continued growth of organics recycling through positive motivation, community awareness, positive public relations, and the creation of a competitive advantage for chains using this recognition to advance their programs.

Facilitating a new composting culture within the supermarket chain and each individual store can be challenging. There is a need to facilitate all relationships between key individuals across the supermarket chains, with the composting facilities, and with the hauling companies in order to ensure maximum benefits to all.

Next Steps – Short Term:

In order to sustain the current momentum, the supermarket sector and MassDEP need to maintain short-term success and set a short-term goal of generating an additional 5,000 tons in 2005 above current levels. In 2004, fifty-four supermarket locations were diverting almost 9,000 tons of organics waste per year to composting facilities. This is in addition to the already successful cardboard recycling programs already in place.

A combination of targeted initiatives to help capture, consolidate and maintain information and provide oversight of all programs is important. These initiatives may include:

- Continue to evaluate locations for compactor programs and converting to compactors where warranted.
- Define an infrastructure to recycle waxed cardboard in toter locations.
- Facilitate business relationships with current and new organics-niche haulers.

- Maximize composting capacity and hauling route density among member chains and independents, and potentially other sectors such as restaurants, hospitals, and other possible generators.
- Increase effectiveness of programs to source-separate more material at the current locations.
- Identify, encourage and implement programs at additional locations within participating supermarket chains, new chains and independent supermarket operators.
- Continue to market organics diversion to chain executives and decision-makers, independent operators, supporting entities, and the communities served by the industry.
- Institute training within each supermarket chain so that it becomes a part of their operational culture.
- Continue to recognize performance internally within the chains and externally through programs such as WasteWise.
- Define elements of the voluntary initiative between the MassDEP and the MFA to provide regulatory relief.

Next Steps: Long Term

The above programs would set the stage to implement a long-term organics diversion goal over the next three to five years that could have the potential to divert over 23,000 tons annually by 2010 or earlier. Most certainly a voluntary or regulatory industry-related organics diversion program would be an effective tool to facilitate accelerated success of organics recycling related to the *Beyond 2000 Solid Waste Master Plan*.

The strategy should focus on making the Supermarket Organics Recycling Network self-sufficient. With support from and in partnership with EPA and others, MassDEP and MFA, and supermarket chain leaders would help move current and future participants towards implementation of organics recycling programs to increase tonnage. Additionally, MFA and supermarket operators would take a lead position which would be viewed by the MassDEP, EPA, the industry, and the public that this program is a proactive and positive effort to do the right thing for the environment and the communities they serve.

It is anticipated that long-term growth of organics recycling in the supermarket industry could have the following results:

- Implementing an organics program should, at a minimum, remain cost neutral to the supermarket operator assuming sufficient organics hauler route density is in place.
- As programs expand to additional locations and composting capacity is optimized, organics disposal fees may drop or, at a minimum, increase slower than landfill disposal fees.
- Successful program results may lead to the negotiation of lower, long-term disposal fees.
- Avoided disposal costs should be modeled into the supermarkets projections of long-term disposal costs. Early voluntary and proactive efforts could ensure lower cost disposal fees.
- Community and public relations benefits are intangible at this time; however, could result in increased sales and/or customer acceptance to supermarket operators who market themselves as being environmentally responsible regarding recycling efforts in the communities they serve.

Summary

This program has set the stage for a successful industry-driven organics-recycling network for supermarket operators in Massachusetts, which sees organics diversion as a preferred business practice. Oversight and program monitoring by designated supermarket program mangers are critical components for capturing results, resolving problems, and identifying opportunities. Supermarket program managers need to communicate effectively and frequently with the participating stores, the composting facilities and the haulers through e-mail, phone calls, store and site visits, digital pictures of loads, and positive feedback. Success of this program has stemmed from hands-on management, ongoing comparative analysis, and continued efforts to improve. The supermarket industry and governmental agencies have and should continue to be proactive in anticipation of future environmental demands, competitive pressures, and/or potential regulatory actions.

Initiatives by MassDEP to increase diversion of organics from supermarket waste streams have gained momentum in the supermarket sector with assistance and support of EPA, WasteCap, MFA, and industry consultants. Championed by MassDEP throughout 2002-2004, the Supermarket Organics Recycling Initiative (SORI) and the Supermarket Organics Recycling Network (SORN) have successfully proven that organics diversion to composting facilities makes business sense for the supermarket industry and has become a preferred waste disposal alternative in fifty-four supermarkets in Massachusetts. A great deal of work has been done by MassDEP to establish this infrastructure for diverting organic waste from landfills to composting facilities including identification of needs for composting capacity, preparing training documents, providing technical assistance and outreach to generators (supermarkets), haulers, composters, and other entities.

Support and endorsement from organizations such as MFA will also ensure this momentum continues. These types of organizations are directly charged with aligning their efforts towards the interests and best practices of supermarket chains and independent supermarket operators. It makes sense to promote sustainable organics diversion as a preferred waste disposal alternative to supermarket operators in Massachusetts. It is essential that ongoing assistance be provided to the industry to maintain and grow the program.

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Worcester Business Journal/Massachusetts Audubon Society 2005 Environmental Award and MassDEP Press Release

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Memorandum of Understanding for Enhancing Recycling in Supermarkets in the Commonwealth of Massachusetts

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Attachment A: Worcester Business Journal/Massachusetts Audubon Society 2005 Environmental Award and MassDEP Press Release

1. Worcester Business Journal, *Pound Wise and Penny Smart* (April '05). Article being sent via mail.

2. MassDEP Press Release: Massachusetts Supermarket Organics Recycling Initiative Wins Worcester Business Journal Environmental Award

FOR RELEASE:
May 3, 2005

CONTACT:
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Massachusetts Supermarket Organics Recycling Initiative Wins Worcester Business Journal Environmental Award

A cooperative effort of the Massachusetts Department of Environmental Protection (DEP), a state regulatory agency, the Massachusetts Food Association (MFA), an industry group, and several supermarket chains has been selected to receive a Worcester Business Journal Environmental Award for positive achievement in recycling.

By helping grocery stores realize the savings potential of composting food scraps and recycling bulk-packaging materials such as cardboard, plastic wrap and glass containers, the Massachusetts Supermarket Organics Recycling Network (SORN) last year assisted in keeping more than 35,000 tons of waste out of landfills and combustion facilities, and saving the supermarkets that participated nearly $2.6 million combined in avoided disposal costs.

"We're pleased that this public-private effort is being recognized, because composting and recycling are powerful ways to help the environment and enhance the supermarket industry's bottom line," said DEP Commissioner Robert W. Golledge Jr. "Now we want to make these practices the norm rather than the exception at supermarkets across Massachusetts, and expand the model into other sectors, such as hospitals and hotels."

Food and bulk-packaging wastes account for up to 90 percent of the material that supermarkets have traditionally thrown away. The 57 grocery stores that participated in SORN last year – including Big Y, Hannaford Bros., Roche Bros., Shaw's/Star, Stop & Shop, and Whole Foods – instead composted and recycled between 60 and 75 percent of this material, diverting 8,900 tons of organics and 26,200 tons of cardboard from disposal, and saving an average of more than $45,000 per store in the process.

"While these may be impressive figures, they are only the beginning," said MFA President Chris Flynn. "The industry could realize more than $4 million in savings per year if all 400 supermarkets in Massachusetts simply recycled their organics. "

The short-term goal of SORN is for 100 Massachusetts supermarkets to be diverting organics by the end of the year. MFA and DEP hope all 400 supermarkets in the state will be participating in voluntary organics recycling within three years.

SORN was among five winners selected by the Worcester Business Journal and Massachusetts Audubon Society, and profiled in a special section of the Journal's April 18

edition. DEP and MFA will be honored during an awards luncheon on May 20 at the Worcester Crowne Plaza.

The Department of Environmental Protection is responsible for ensuring clean air and water, safe management and recycling of solid and hazardous wastes, timely cleanup of hazardous waste sites and spills, and the preservation of wetlands and coastal resources.

Attachment B: Memorandum of Understanding for Enhancing Recycling in Supermarkets in the Commonwealth of Massachusetts

Memorandum of Understanding
for
Enhancing Recycling in Supermarkets in the Commonwealth of Massachusetts

August 24, 2005

This Memorandum of Understanding is made and entered into voluntarily by and between the following parties: The Massachusetts Department of Environmental Protection and The Massachusetts Food Association on behalf of its Members.

This Memorandum of Understanding (MOU) expresses the combined commitment of the Massachusetts Department of Environmental Protection (MassDEP) and the Massachusetts Food Association (MFA) to encourage supermarket companies to undertake a collaborative effort to advance the concept and practice of recycling organic supermarket and grocery store waste through diversion to organics recycling and composting facilities and/or other acceptable methods. This MOU demonstrates an effective public-private partnership that will yield environmental and economic benefits.

The MassDEP has adopted the *Beyond 2000 Solid Waste Master Plan*. The goal of this plan is "reducing the waste we produce by 70% through recycling and source reduction by 2010". MassDEP estimates that less than 10 percent of the nearly 900,000 tons of commercial food waste generated each year in Massachusetts are diverted from disposal. Commercial food waste represents close to 19% of the total commercial waste stream. In the *Beyond 2000 Solid Waste Master Plan*, MassDEP identified food waste diversion as a priority focus area for waste reduction.

The MFA is a membership organization that represents the interests of the supermarket and grocery industry in the Commonwealth of Massachusetts. Supermarkets generate significant organic waste materials suitable for composting. There are over 400 supermarkets in Massachusetts. The MassDEP and the MFA wish to work cooperatively in order to voluntarily further the implementation of the *Beyond 2000 Solid Waste Master Plan* and subsequent revisions associated with organic supermarket waste.

The MassDEP and the MFA agree to collaboratively:

1) Explore opportunities to evaluate, promote, and enhance innovative and economically viable solutions and technologies for the collection, recovery, and recycling of organics waste, as well as other recyclables (e.g., cardboard) to prevent their disposal into landfills or incinerators.

2) Develop institutional and sustainable solutions for the growth of organics source separation and composting programs through voluntary initiatives by supermarket operators, and support achievement of industry goals established by MassDEP, MFA, and MFA's members.

3) Identify quantifiable goals by company tonnage and/or store participation and execute plans for strategic and permanent long-term success of organics diversion in the supermarket sector.

4) Engage in proactive efforts related to the voluntary commitment of supermarkets to increase rates of organics diversion in Massachusetts in anticipation of future regulatory actions related to organic wastes from supermarkets.

5) Participate in the development of a joint MassDEP/MFA strategy that will assure the ongoing success of supermarket organics recycling, including the concepts of institutionalization and sustainability.

In implementing this MOU, the MassDEP commits to:

1) Develop voluntary supermarket certification program between MassDEP and individual supermarket locations. Supermarkets participating in this certification program may receive an exemption on existing waste ban regulations on a store by store basis if they certify and maintain records that can verify that certain waste reduction programs are in place, including:
    a) A cardboard (Old Corrugated Container) recycling program ensuring that trash loads meet waste ban compliance standards;
    b) A food reuse and donation program;
    c) An organics (e.g., food residuals, waxed cardboard) recycling program; and
    d) A shrink wrap/plastic wrap-recycling program.

2) Offer regulatory relief or exemption from comprehensive inspection for supermarkets that annually certify to MassDEP, on a form provided by MassDEP, that they have a recycling program in place as outlined above (item 1), their loads will not be subject to comprehensive inspections by the receiving facility for the presence of recyclable and compostable materials (paper; glass, metal and plastic containers; leaves and yard waste) at solid waste facilities and transfer stations, in accordance with the Commonwealth's waste ban regulations and policies (310 CMR 19.017).
    a) Once a supermarket company certifies that a particular store has the above programs in place, that particular store would receive the exemption.
    b) As long as a supermarket company establishes and maintains the above programs in 80% of its stores, the company would receive company wide exemption. This exemption threshold of 80% will remain in effect until 2010.
    c) The MassDEP may update the criteria of this program in cooperation with the MFA or as a result of regulatory changes.

3) Provide Technical Assistance. Supermarkets will be eligible for technical assistance to set up recycling programs:
    a) The MassDEP will provide such assistance for at least two years, subject to appropriation of funding.
    b) In exchange for receiving this assistance, supermarkets will be required to provide data on the progress of the programs in a fashion that would enable the MassDEP to qualify and quantify the success of the efforts.

4) Provide pertinent information on current waste management best practices for recycling of supermarket wastes in the Commonwealth of Massachusetts. The MassDEP will continue to implement its *Solid Waste Master Plan* strategy of building an organics processing and hauling infrastructure to support organics diversion efforts.

5) Clearly and concisely, state the conditions of any future proposed disposal ban on supermarket organics and define statewide goals of organics diversion while taking into consideration any local mandates that may affect these goals. The MassDEP will work with the MFA to incorporate any new disposal ban into the certification program.

In implementing this MOU, the MFA commits to:

1) Encourage its membership to increase the amount of supermarket organics waste diverted from land-filling/incineration to organics recycling/composting in Massachusetts.

2) Increase awareness among supermarket companies and the community of the positive environmental, operational, and financial impacts of organics diversion and composting.

3) Recruit additional stores within current supermarket companies, new supermarket companies, and independent operators.

4) Work with the supermarkets to encourage annual certification to the MassDEP that they have the requisite programs in place through reporting on:

    a) Type of recycling and reuse programs (cardboard, organics, shrink-wrap)
    b) List of stores with programs (including all contact information)
    c) Haulers used, per store; and
    d) Where the material is going, per store.

5) Work in partnership to develop educational and technical assistance materials.

By signing this MOU, the MassDEP and the MFA express their intent to work voluntarily and cooperatively in order to further the goals of the *Beyond 2000 Solid Waste Master Plan* and subsequent revisions. MOU-associated activities will be conducted through the joint efforts of the MassDEP and the MFA.

_____ _____

Robert W. Golledge, Jr. Date
Commissioner,
Massachusetts Department of Environmental Protection

_____ _____

Christopher Flynn Date
President,
Massachusetts Food Association

Attachment C: MassDEP Press Release: State And Industry Group Sign Agreement To Spur Supermarket Recycling Across Massachusetts

FOR RELEASE:
August 24, 2005

CONTACT:
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State And Industry Group Sign Agreement To Spur Supermarket Recycling Across Massachusetts

The Massachusetts Department of Environmental Protection (MassDEP) and the Massachusetts Food Association (MFA), a supermarket industry group, today announced that they have signed a memorandum of understanding that will encourage grocery stores across the state to increase their recycling participation particularly in the composting of such items as spoiled fruits and vegetables, floral and deli wastes, and waxed cardboard. The agreement outlines a collaborative effort between the state agency and the industry group to advance recycling at supermarkets across Massachusetts by expanding their existing Supermarket Organics Recycling Network (SORN).

MassDEP will do its part by providing technical assistance to stores that want to start new programs and developing a voluntary certification program to provide regulatory relief incentives for supermarkets that establish and maintain comprehensive recycling programs.

“This program is beneficial to everyone in Massachusetts, said MassDEP Commissioner Robert W. Golledge, Jr. Supermarkets save money, recyclers receive a steady stream of clean organic materials so they can produce good compost to sell, and the environment is better off because the more we recycle, the less we need new waste disposal facilities.”

MFA President Chris Flynn added: “We have worked together to develop an environmental protection program that makes sense for the supermarket industry. It is an opportunity for us to support state efforts to increase recycling and avoid the need for more landfills.”

Food and bulk-packaging wastes account for up to 90 percent of the material that supermarkets have traditionally thrown away. The state is working to divert these items from disposal because they are easy to recycle and valuable to recyclers. Organic wastes, for example, can be processed into nutrient-rich soil products.

The 57 grocery stores that participated in SORN last year including Big Y, Roche Bros., Shaw's/Star, Stop & Shop, and Whole Foods supermarkets composted and recycled between 60 and 75 percent of their waste, diverting 8,900 tons of organics, 26,200 tons of cardboard, and more than 1,000 tons of plastic from disposal, saving an average of more than $45,000 per store in the process.

Participation has since grown to 62 supermarkets. MassDEP and MFA hope at least 100 Massachusetts grocery stores will be recycling organics by next year. Their ultimate goal is for all 400 supermarkets in the state to have active recycling programs in place within three years.

EPA applauds the collaboration in Massachusetts that will expand recycling at grocery stores throughout the state," said Robert W. Varney, regional administrator of the U.S. Environmental Protection Agency New England regional office, which has supported the SORN program through grant funding. “These efforts will help us meet our goal of achieving a 35 percent recycling rate across the country by 2008. EPA is hoping to replicate the Massachusetts program nationally“.

In May, SORN received a Worcester Business Journal/Massachusetts Audubon Society award for environmental achievement.

Stores participating in the Supermarket Organics Recycling Network (SORN)
Big Y supermarkets in: Amherst, Springfield (800 Boston Rd. and 1090 St. James Ave.), Greenfield, Longmeadow, West Springfield, Northampton, and Southampton.

Roche Brothers supermarkets in: Acton, Bridgewater, Norton, Marshfield, Easton, Mashpee, Westwood, Natick, Millis, Quincy, Burlington, West Roxbury, Needham and Sudbury.

Shaws supermarkets in: Taunton, Plymouth, Hyannis, East Falmouth, and Carver.

Star Markets in: Hyannis, Harwich, South Yarmouth and Orleans.

Stop & Shop supermarkets in: Pittsfield (660 Merril Rd., and Dan Fox Drive), Chicopee, Greenfield, Springfield (Liberty Street and 1600 Boston Post Rd.), Westfield, West Springfield, Hadley, Feeding Hills, North Adams, Northampton, Sandwich, South Yarmouth, Harwich, Hyannis, Orleans, Marston Mills, Mashpee, Falmouth, South Dennis, Sandwich and East Wareham.

Whole Foods Market in: Hadley, Bellingham, Bedford, Hingham, Newtonville, Wayland, Framingham and Swampscott.

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The Department of Environmental Protection is responsible for ensuring clean air and water, safe management of solid and hazardous wastes, timely cleanup of hazardous waste sites and spills, and the preservation of wetlands and coastal resources.

Attachment D: MassDEP Press Release: Six Supermarket Chains Honored for Leadership in Recycling Food and Packaging Waste

FOR RELEASE:
October 7, 2004

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SIX SUPERMARKET CHAINS HONORED FOR LEADERSHIP IN RECYCLING FOOD AND PACKAGING WASTES

BOSTON—Massachusetts and federal environmental officials honored six supermarket chains today for their leadership in composting food wastes instead of throwing them away, and for aggressively recycling a range of materials, including bottles, cans, cardboard, shrink wrap and stretch wrap.

Receiving Massachusetts WasteWise Supermarket Recycling Leadership Awards were Big Y Foods, Hannaford Bros., Roche Bros., Shaw's Supermarkets, Stop & Shop Supermarkets, and Whole Foods Market. The awards were presented at a meeting of the Massachusetts Food Association (MFA), a supermarket industry group.

"By working together, government and the supermarket industry have found proactive and flexible ways to conserve natural resources and reduce the costs of doing business," said Ira Leighton, Deputy Regional Administrator for EPA New England.

"Composting and recycling benefit both the environment and the supermarket industry's bottom line," said state Department of Environmental Protection (DEP) Commissioner Robert W. Golledge Jr. "Now we want to make these practices the norm rather than the exception at supermarkets across Massachusetts."

Forty-five participating Massachusetts supermarkets are currently diverting some 6,600 tons of organics and 21,000 tons of cardboard and other recyclables from disposal facilities each year. This translates to an annual disposal cost savings of approximately $7,000. These savings are particularly impressive when put in the context of the razor thin profit margins in the supermarket industry. To generate $10,000 to $20,000 of profit, a supermarket would need to sell one to two million dollars of product. Some supermarkets have saved as much as $20,000 annually.

"While those may be impressive figures, they are only the beginning," said MFA president Chris Flynn. "The industry could realize more than $4 million in savings per year if all 400 supermarkets in Massachusetts recycled their organics."

The WasteWise Awards, sponsored by DEP and the U.S. Environmental Protection Agency (EPA), are given to companies that demonstrate recycling leadership, sustainability and innovation. The two agencies jointly fund the Massachusetts WasteWise Program, which provides waste reduction assistance to businesses and organizations. Participation is voluntary.

"We are also looking to partner with other business sectors to think environmentally and benefit economically," DEP Commissioner Golledge added. Other sectors DEP is interested in partnering with include food processors, restaurants and the heathcare.

Attachment E – Sample Memorandum of Understanding with Supermarkets

This Memorandum of Understanding (MOU) expresses the commitment of [name of contractors or others that are providing assistance] (henceforth "Grantees") of the FY 04 Supermarket Organics Recycling Network (SORN) Project, and [name of supermarket] (henceforth "participant organization") to undertake a collaborative effort to assist supermarkets in optimizing organics diversion efforts and demonstrate an effective private/public partnership that creates environmental and economic benefits.

Goals:

- Understand the status of organics recycling programs currently in place.
- Assist supermarkets to shore up programs currently in place.
- Add new supermarkets within existing chains to the program.
- Recruit new chains.
- Develop strategy for ongoing success – institutionalization.

In implementing the Project [those providing assistance] commit to:

- Track information.
- Identify assistance needs.
- Provide identified assistance to existing supermarkets, waste facilities and haulers.
- Recruit additional stores and other chains.
- Plan for sustainable success.

The participant organization commits to:

- Make available a contact resource to the Project and provide pertinent information on current waste management practices and the recycling of supermarket organics.
- Incorporate and/or expand supermarket organics diversion where and when it is operationally and/or financially advantageous.
- Consider evaluating current waste management systems to achieve meaningful levels of organics recycling and realize cost reduction opportunities where available.
- Review all relevant Project reports.
- Participate in meetings, facilitate supermarket site visits, and provide pertinent operational and financial data to the Grantees in support of the Project goals.
- Share the results of the process with the public, consistent with any non-disclosure agreement and a set of Public Disclosure Guidelines (please see Attachment A).

Project activities will be conducted by the joint team of Grantees and participant organization and will take place according to the timetable (please see Attachment B). Grantees will sign a non-disclosure agreement (NDA) with the participating organization if necessary.

Approved:

By:_____ _____
[Participant Organization] Date

Organization Name: _____Contact name:_____
Contact telephone: _____Contact email: _____

By:_____ _____
[Contractor or assistance provider name] Date

Appendix A:
PUBLIC DISCLOSURE GUIDELINES AND AGREEMENT

This Public Disclosure Agreement expresses the commitment of {name of funder} and {name of supermarket} (henceforth "participant organization") to disseminate FY 04 Supermarket Organics Recycling Network (SORN) Project results under the terms outlined below and in accordance with any other confidentiality or non-disclosure agreements signed by both Grantees and the participant organization (henceforth referred to collectively as "the parties").

1. In accordance with any parties Confidential Information Non-Disclosure Agreement, all parties agree that information identified by any entity as "Confidential and/or Proprietary" will not be released by any parties involved in the Project.

2. Participating organizations will be allowed to review and revise any information MassDEP intends to make public to ensure confidential data is respected.

3. It is anticipated that information describing the Project will take the following forms:

   a) Case study and public presentation materials that document the activities carried out as part of the Project and help facilitate replication of successful aspects of the Project, including a Project final report.

   b) Media-related writings and appearances (e.g. press releases, opinion editorials, articles, and media interviews) that inform the public about the Project, its goals, and its outcomes.

4. The following aspects of the Project may be part of any public discussions and information dissemination efforts:

   a) Project Goals and other Proposal information developed by MassDEP.

   b) Issues related to organizations' waste management, recycling, and associated contracting activities.

   c) Information concerning decisions made, findings/learnings, and recommendations made in the course of the Project.

5. Each party may discuss and disseminate information about the Project independently. However, these communications should be undertaken with mutual respect and regard for the concerns and interests of the other parties. To the extent possible, therefore, the parties will keep each other apprised--in advance--of any public announcements about the Project in which they participate. To facilitate this process, each party will identify one person who will manage/oversee public communication about the party's role in the Project and serve as the primary contact for public inquiries.

Approved:

By:_____ _____
Participant Organization Date

Organization Name: _____Contact name: _____
Contact telephone: _____Contact email: _____

By:_____ _____
[Contractor or assistance provider name] Date

Appendix B
DRAFT TIMETABLE

Track Information - 04/09/04

Identify Assistance Needs – 04/26/04

Provide identified assistance to existing supermarkets, waste facilities and haulers – 05/17/04

Recruit Additional Stores and Other Chains – 05/17/04

Plan for Sustainable Success – 06/30/04

Attachment F - Organics Tracking SORN 2004

See attached table (Organics Tracking SORN 2004.pdf)

Attachment G - Tonnage Table SORN 2004

See attached table (TonnageTable_SORN_2004.pdf)

Attachment H: Assumptions in Determining General Supermarket Economics

- Landfill disposal fees in Massachusetts range from $80.00 - $100.00 per ton.
- Organics disposal fees for composting range from $35.00 - $65.00 per ton.
- Average organics tons diverted per supermarket equals 160 tons per year.
- Average savings per year in disposal fees equals $4,400 per store.
- Annual savings from organics diversion are as high a $20,000 per year in a number of existing supermarket locations.
- Annual supermarket sector impact of 20,000 tons diverted per year across approximately 115 locations equals $700,000 in reduced disposal costs to the operators.
- Organics hauling fees may increase depending upon program operation: i.e.: Compactor vs. Toter organics program.

Attachment I: Estimate of greenhouse gases reduced through diversion efforts (MTCE)

Using the EPA Warm Model, total change in greenhouse gas emissions from recycling organics, cardboard and plastics at 54 supermarkets in MA estimates a reduction between 21,100 and 22,400 MTCE.

Organics:
Since we do not know the mix of organics (food scraps/waxed cardboard/other) we calculated both diversion of "food scraps" and a diversion of "mixed organics":

- 7,800 tons of "food scraps" diverted from landfilling to composting estimates a reduction of 1,800 MTCE (landfilling = 1,300 of MTCE and composting = 400).
- 7,800 tons of "mixed organics" diverted form landfilling to composting estimates a reduction of 500 MTCE (landfilling = 60 MTCE and composting = 400 MTCE).

Cardboard:
This calculation assumes no cardboard was recycled previous to this program. However, most supermarkets have cardboard recycling programs in place.

- 24,600 tons of OCC diverted from landfilling to recyling estimates a reduction of 20,300 MTCE (landfilling = 1,900 MTCE and recycling = 18,400 MTCE).

Plastic:

- 900 tons of HDPE diverted from landfilling to recycling estimates a reduction of 400 MTCE (landfilling = 9 MTCE and recycling = 300 MTCE).

Attachment J: Composting is Happening at Whole Foods

COMPOST IS HAPPENING AT WHOLE FOODS MARKET

The Milford Daily News

August 3, 2004

BELLINGHAM - In celebration of the store's new composting program, a "Compost Happens Here" event will take place throughout the day tomorrow at the Bellingham store. The event will include exhibits from We Care Environmental, the store's composting partner, and the Massachusetts Dept. of Environmental Protection (DEP), which will also provide consumer handouts on the how-to's of composting at home. Local farmers and growers will also be featured, including Allen Farms of Wesport, who will be giving away fresh basil seedlings with compost from Whole Foods Market. A free composting workshop will be offered at 7 p.m., led by Ann McGovern, consumer waste reduction coordinator at the DEP. Seating is limited, so pre-registration is suggested by calling 508-966-3331.

Whole Foods Market, recently announced a revamped recycling program to include composting of its appropriate waste. To let their customers know how proud they are of their efforts, team members wear apron buttons that say "Compost Happens Here!" And they should be proud. The first load from the new compost dumpster delivered to its composting facility weighed in at about 7 tons. That is in comparison to the less than 3 ton load of non-compostable trash.

The store is also selling a limited supply of home composting machines at a special price of just $30 For more information about this, please contact Bonnie Frechette at 508-966-3331.

"The Bellingham store team members are really taking this program to heart," explains Lee Kane, environmental coordinator for Whole Foods Market's North Atlantic Region. "They've really embraced it and it shows." The company's composting facility partner, We Care Environmental of Marlboro, reported very "clean" loads from the Bellingham store, meaning there have been no contaminants such as plastic or metal mixed in.

Throwing something away now takes extra effort for Whole Foods team members. Each department now has a red and green colored trash bin - one for compostable waste and one for co-mingled recyclables including plastic, glass and metal. Compostable waste includes food preparation scraps, spoiled food, paper, cardboard, coffeegrounds/filters, paper cups/plates, flowers, plants, soil, deli, bakery and dairy products. A traditional waste bin collects non-recyclable products including plastic gloves, plastic tableware, wood pieces, food packaging, tape and mixed trash. However, the task is aided by signage that designates what goes into the appropriate bin.

The compost program speaks to one of our company's Core Values and that is that we follow "Wise Environmental Practices" by "respecting our environment and recycle, reuse, and reduce our waste wherever and whenever we can," explains Bonnie Frechette, the Bellingham store's community affairs representative. "Also speaking to environmental stewardship, we announced earlier this year our company's long-term commitment to wind energy by purchasing "wind energy certificates" from new wind projects in the North East and Mid-Atlantic from Community Energy Inc." The amount of wind energy purchased by Whole Foods is roughly equivalent to the electricity consumed each year by almost 2,000 average homes.